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THE UNITED STATES OF AMERICA
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

WENTWORTH, 1882

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THE PLANS PROVIDE FOR AN EMBANKMENT OF EARTH, SPRINKLED AND ROLLED IN 8-INCH LAYERS, WITH A HEIGHT ABOVE THE PRESENT STREAM BED LEVEL OF ABOUT 50 FEET, AND A FREE-BOARD OF 5 FEET SUPPLEMENTED BY A 2.5 FOOT STONE PARAPET. STUDIES OF THE PHYSICAL ANALYSES OF EARTH FROM 14 TEST PITS LED TO THE CONCLUSION THAT THE UPSTREAM FACE SHOULD HAVE A SLOPE OF 3 TO 1 WITH A HEAVY RIPRAP OF SAND STONE AS A PROTECTION AGAINST WAVE ACTION, AND THE DOWNSTREAM FACE SHOULD BE ON A 2 TO 1 SLOPE WITH A FOOTING OF ROCK. A 12-INCH CAST IRON PIPE LINE ABOUT 250 FEET IN LENGTH, LAID IN A TRENCH WELL DOWN INTO BED ROCK AND PROVIDED WITH CONCRETE COLLARS, GATE VALVES, VALVE CHAMBER, AND OTHER NECESSARY APPURTENANCES SERVES TO DRAIN THE RESERVOIR WHEN IT BECOMES NECESSARY.

THE STRUCTURE OF GREATEST INTEREST IS THE SPILLWAY. THE DRAINAGE BASIN OF THE STREAM, WHILE SMALL AND LYING IN A REGION HAVING AN AVERAGE ANNUAL PRECIPITATION OF ONLY ABOUT 16 INCHES, IS ROLLING AND UNEVEN AND SUBJECT TO SEVERE STORMS, AND THE RUN-OFF MAY BE VERY GREAT AT TIMES. IT WAS DECIDED, THAT A HIGH VELOCITY CHANNEL SPILLWAY, OF SUFFICIENT LENGTH AND CHANNEL GRADE TO CARRY OFF ANY FLOOD THOUGHT POSSIBLE, SHOULD BE PROVIDED, CAPABLE OF DISCHARGING SOME 3,000 SECOND FEET OF WATER BEFORE THE DAM WAS SERIOUSLY MENACED.

THE LINE OF THE TUNNEL IS PLANNED TO PASS DIRECTLY UNDER THE PERMANENT SPILLWAY ABOUT MIDWAY OF THE LENGTH OF EACH. IT IS THEREFORE PROVIDED THAT THE HIGHER SPILLWAY SHALL DISCHARGE INTO THE TUNNEL AT THE CROSSING POINT BY MEANS OF A WELL CONNECTING THE TWO, THUS SAVING THE CONSTRUCTION OF THE LOWER HALF OF THE UPPER SPILLWAY AS FORMERLY DESIGNED, AND OBTAINING THE NECESSITY FOR A HIGHWAY BRIDGE, EFFECTING MATERIAL SAVINGS IN BOTH ITEMS.

C. E. RAMSER READ A PAPER, "THE PREVENTION OF THE EROSION OF FARM LANDS BY TERRACING," BEFORE THE ANNUAL MEETING OF THE AMERICAN SOCIETY OF AGRONOMY AT WASHINGTON ON NOVEMBER 23. HE RETURNED TO CAPE GIRARDEAU, MO., VIA RALEIGH, N. C., WHERE HE SPENT A DAY LOOKING OVER MR. BARTEL'S WORK IN CONNECTION WITH EROSION AND THE RUN-OFF FROM TERRACED LANDS.

IN HIS CAPACITY AS EXTENSION AGRICULTURAL ENGINEER WITH THE DEPARTMENTAL OFFICE OF EXTENSION WORK, L. A. JONES RECENTLY SPENT THREE DAYS IN SOUTH CAROLINA COLLABORATING IN EXTENSION WORK ON TERRACING WITH PROFESSOR J. T. McALISTER OF CLEMSON COLLEGE.

GEORGE R. BOYD THE LATTER PART OF NOVEMBER RETURNED FROM HIS EXTENDED TRIP TO MINNESOTA IN CONNECTION WITH COOPERATIVE LANDCLEARING STUDIES WITH THE UNIVERSITY OF MINNESOTA. AN ASSOCIATE ENGINEER WILL BE APPOINTED IN THE NEAR FUTURE TO ASSIST MR. BOYD ON PROJECTS OF THIS CHARACTER.

C. E. RAMSER HAS BEEN SELECTED TO HAVE CHARGE OF THE RESEARCH WORK ON EROSION AND TERRACING ON THE GUTHRIE, OKLA. FARM, REFERENCE TO WHICH HAS BEEN MADE IN EARLIER ISSUES OF THE NEWS LETTER. MR. RAMSER WILL REMOVE HIS HEADQUARTERS FROM CAPE GIRARDEAU TO GUTHRIE ABOUT JANUARY 1, AND WILL PROCEED IMMEDIATELY TO THE INSTALLATION OF THE NECESSARY INSTRUMENTS AND EQUIPMENT FOR CARRYING OUT THESE STUDIES, WHICH ARE EXPECTED TO CONTINUE FOR SEVERAL YEARS. A SUBSEQUENT ISSUE OF THE NEWS LETTER WILL CONTAIN A DESCRIPTION OF THE EXPERIMENTS TO BE CONDUCTED THERE.

The tunnel is about 1,000 feet long and is situated in the mountains of the State of New York. It was constructed by the New York State Thruway Authority and is now open to traffic. The tunnel is a single lane and is used for the purpose of connecting the two ends of the Thruway. It is a very important link in the Thruway system and is used by thousands of vehicles every day. The tunnel is a very modern structure and is well maintained. It is a very safe and convenient way of traveling between the two ends of the Thruway.

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IN COOPERATION WITH THE HENDERSON COUNTY DRAINAGE DISTRICTS NOS. 1 AND 2, ILLINOIS, STUDIES HAVE BEEN INAUGURATED DEALING WITH THE EFFECT OF PUMPING ON THE ELEVATION OF THE SOIL WATER IN THESE DISTRICTS. J.C. SUTTON WILL HAVE CHARGE OF THIS WORK FOR THIS DIVISION AND WILL CONDUCT THESE INVESTIGATIONS INCIDENTAL TO HIS WORK ON DRAINAGE PUMPING.

ELI J. SAX, WHO RECENTLY WAS APPOINTED AS JUNIOR AGRICULTURAL ENGINEER FOR SERVICE IN CONNECTION WITH CORN BORER CONTROL AT TOLEDO, OHIO, HAS RESIGNED TO ACCEPT APPOINTMENT WITH A PUBLIC SERVICE CORPORATION IN NEW YORK CITY.

R. L. PARSHALL REPORTS THAT HIS BULLETIN "THE IMPROVED VENTURI FLUME" HAS BEEN PUBLISHED AS BULLETIN 336 OF THE COLORADO EXPERIMENT STATION. THIS BULLETIN CAN BE SECURED BY WRITING EITHER TO MR. PARSHALL OR TO THE COLORADO AGRICULTURAL COLLEGE AT FORT COLLINS.

ON NOVEMBER 24, A CONFERENCE WAS HELD IN THE BERKELEY OFFICE ON NOMENCLATURE OF IRRIGATION AND SOIL MOISTURE TERMS. THERE WAS ALSO A DISCUSSION OF THE TECHNIQUE OF EQUIPMENT AND ITS OPERATION FOR THE DETERMINATION OF EVAPORATION AND TRANSPIRATION LOSSES AS DETERMINED IN TANKS OR POTS. THOSE ATTENDING THE CONFERENCE WERE W. W. McLAUGHLIN, H. F. BLANEY, C.A. TAYLOR, O.V.P. STOUT, F. J. VEIHMAYER, S. H. BECKETT, L. T. JESSUP, A. T. MITCHELSON, F. C. SCOBIE, A. L. FELLOWS, P. A. EWING, S. FORTIER, A. A. YOUNG AND L. N. BROWN.

CARL ROHWER REPORTS THAT THE RESULTS OF THE FINAL COMPUTATION ON THE EFFECT OF ALTITUDE ON THE EVAPORATION SHOW THAT WHEN OTHER CONDITIONS REMAIN THE SAME, THE EVAPORATION INCREASES AS THE ALTITUDE INCREASES AND THE BAROMETRIC PRESSURE DECREASES. BOTH THE BAROMETER AND THE ALTITUDE, HOWEVER, CHANGE AT A FASTER RATE THAN THE EVAPORATION.

AT THE CLOSE OF THE 1927 SEASON, AFTER FOUR YEARS' WORK ON THE SEDIMENTARY LANDS OF THE SACRAMENTO-SAN JOAQUIN DELTA, CALIFORNIA, O.V.P. STOUT REPORTS THAT "BY INCLUDING A TENTATIVE FACTOR IN THE AMOUNT OF ONE-HALF ACRE-FOOT PER ACRE TO ACCOUNT FOR SEEPAGE, IT IS POSSIBLE TO SUBMIT TWO ACRE-FOOT PER ACRE AS A MEASURE OF THE CONSUMPTIVE USE OF WATER IN ONE IRRIGATION SEASON ON THE CROPPED AREA. FULL SCALE INVESTIGATIONS ON THESE LANDS HAVE THEREFORE BEEN SUSPENDED AND OPERATIONS NOW IN PROGRESS AND CONTEMPLATED FOR THE IMMEDIATE FUTURE CONSIST OF THOSE ON THE PEAT LANDS, CENTERING AT KING ISLAND, AND OF A RESIDUAL OF SPECIAL INVESTIGATIONS, CHIEFLY IN REGARD TO SEEPAGE, ON THE SEDIMENTARY LANDS."

L. T. JESSUP, WHO IS LEADER OF A PROJECT EMBRACING PUMPING FOR IRRIGATION AND DRAINAGE HAS SUBMITTED THE FOLLOWING INTERESTING INFORMATION AS A RESULT OF A BRIEF STUDY OF CONDITIONS IN THE SAN JOAQUIN VALLEY, CALIF.:

The first of these is the fact that the Commission has been established by the President of the United States, and is therefore a part of the Executive Branch of the Government. This is in contrast to the other two commissions, which are established by Congress and are therefore a part of the Legislative Branch of the Government.

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DISTRICT	WELLS	AVERAGE : NO. OF : SIZE OF : WELL	AVERAGE : DEPTH OF : WELL	AVERAGE : DRAWDOWN : BELOW : GROUND : SURFACE	AVERAGE : COST PER : WELL 1/	PUMPED : PER YEAR : PER WELL	AVERAGE : COST PER : ACRE FOOT : 2/
		INCHES	FEET	FEET	DOLLARS	ACRE-FT.	DOLLARS
MERCED	73	18	125	32	3,500	750	1.70
MODESTO	50	14+	100	24	1,575	725	.90
SOUTH SAN JOAQUIN	42	16	125		2,650	700-EST.	1.00
TURLOCK	80	16	120	31	2,060	900	1.30

1/ THESE FIGURES WERE OBTAINED BY DIVIDING TOTAL COST OF SYSTEM BY NUMBER OF WELLS CAPABLE OF OPERATING. IT INCLUDES COST OF OUTLET PIPE AND IN SOME CASES COST OF POWER LINES. IT ALSO INCLUDES THE COST OF AUXILIARY WELLS AND OF WELLS THAT HAVE BEEN ABANDONED.

2/ THIS FIGURE INCLUDES AN ITEM OF 10 PER CENT FOR INTEREST AND DEPRECIATION.

M. C. BETTS REPORTS THAT PLANS WERE PREPARED RECENTLY FOR A SMALL STRUCTURE PROVIDING WORK ROOMS, STORAGE AND HEATING PLANT, THE LATTER BEING DESIGNED TO PROVIDE HEAT FOR OTHER EXISTING AND FUTURE BUILDINGS, TO BE ERECTED AT FORT VALLEY, GEORGIA, FOR PEACH DISEASE INVESTIGATIONS. ALSO BUREAU OF PLANT INDUSTRY DRAWINGS FOR A STORAGE SHED FOR BULBS, TO BE ERECTED AT JAMES ISLAND, S. C., FOR BULB CULTURE INVESTIGATIONS.

GEORGE M. WARREN HAS COMPLETED THE MANUSCRIPT FOR A FARMERS' BULLETIN ON "FARM WATER POWER" WHICH IT IS HOPED TO HAVE PUBLISHED DURING 1929.

THE REVISION OF THE MANUSCRIPT FOR A TECHNICAL BULLETIN ON THE "VENTILATION OF FARM BARNs," BY M.A.R. KELLEY, HAS BEEN COMPLETED AND WILL BE SUBMITTED TO THE RESEARCH COMMITTEE IN THE NEAR FUTURE.

